REMARKS

This paper is submitted in reply to the Office Action dated December 2, 2005, within the three-month period for response. Reconsideration and allowance of all pending claims are respectfully requested.

In the subject Office Action, claims 35-36 were rejected under 35 U.S.C. § 112 first and second paragraphs. Moreover, claims 1-4, 6, 8-10, 12, 14-19, 21, 23-25, 27 and 29-36 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0161923 to Foster et al. Furthermore, claims 5, 7, 11, 13, 20, 22, 26 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Foster et al. in view of U.S. Patent No. 6,587,866 to Modi et al.

Applicants respectfully traverse the Examiner's rejections to the extent that they are maintained. Applicants have canceled claims 2 and 17 and amended claims 1, 3-4, 7, 16, 18-19, 22, 31 and 35. Applicants respectfully submit that no new matter is being added by the above amendments, as the amendments are fully supported in the specification, drawings and claims as originally filed.

Now turning to the subject Office Action, and specifically to the § 112, first and second paragraph rejections of claims 35 and 36, the Examiner apparently objects to the terms "signal bearing medium", "bearing the program code", and "transmission medium". Each of these terms, however, is discussed at p. 9, l. 25 to p. 10, l. 5. One of ordinary skill in the art having the benefit of the instant disclosure would readily appreciate that a signal bearing medium may be a recordable-type medium such as a memory or a DVD, or a transmission-type medium such as a digital communication link. Furthermore, one of ordinary skill in the art would readily appreciate that a medium "bears" program code when the program code is stored or communicated over a medium. Applicants submit that the aforementioned language is neither indefinite, nor is it insufficiently described in the application. Reconsideration and withdrawal of the §112, first and second paragraph rejections are therefore respectfully requested.

Next, turning to the art-based rejections, and specifically to the Examiner's rejection of independent claim 1, this claim generally recites a method of communicating

between a source and a target node in a clustered computer system. The method includes establishing a cluster data port between the source node and a target node, and communicating data from the source node to the target node using the cluster data port. The cluster data port is configured to select among a plurality of connection paths between the source node and the target node, and to selectively switch over data flow from the target node to a backup target node.

Furthermore, claim 1 has now been amended to additionally recite that establishing the cluster data port includes establishing multiple concurrent logical connections between the source node and the target node, where each logical connection is configured to communicate data over a connection path among the plurality of connection paths. Claim 2 has been canceled, and claims 3-4 have been amended to depend from claim 1. Furthermore, claim 7 has been amended to conform with the amended language in claim 1, and now specifies that each logical connection comprises a TCP connection, support for which may be found at page 16, lines 21-23 of the Application as filed.

As discussed, for example, at page 6, lines 2-6 and page 16, lines 21-23, and as shown in Fig. 6 of the Application as filed, one aspect of Applicants' claimed cluster data port service is the encapsulation and management of multiple network connections between a source node, a target node and one or more backup nodes in such a manner that a cluster data port is effectively utilized as single data port from the perspective of a user program. In this regard, in many embodiments consistent with claim 1, multiple sockets are established between source and target nodes during the establishment of a cluster data port, resulting in multiple logical connections (e.g., TCP connections) being established for the cluster data port.

Furthermore, the multiple logical connections are concurrent from the standpoint that multiple logical connections are established at a given point of time. *See, e.g.,* Application, page 16, line 21 to page 17, line 2. This is in contrast to a situation where one logical connection is established, that logical connection is terminated, and another logical connection is later established.

In rejecting claim 1, the Examiner relies on Foster, and in particular, the abstract and paragraphs [0015] and [0024] thereof. Foster, however, merely discloses a network-oriented routing system that dynamically controls routers in a switched network to communicate information between multiple nodes connected to the switched network. Foster establishes "virtual addresses", and controls mapping tables in various routing devices in a network such that communications associated with particular virtual addresses and received at a source port of a routing device are output to appropriate destination ports in the routing device that are associated with the specified virtual addresses.

Foster, however, establishes only one path at a time for a particular virtual address used by a source node. Paragraph [0015], for example, merely discloses managing an interconnect fabric of routing devices that are configured to establish a path that is uniquely associated with a virtual address. Paragraph [0024], on the other hand, discusses the possibility of identifying and configuring new paths, and assigning new paths to virtual addresses. However, it is evident from Foster that in general only a single path is associated with a given virtual address used by a source node at any particular point in time.

Applicants respectfully submit that Foster fails to disclose the establishment of multiple logical connections, much less multiple _concurrent_ logical connections, between a source and a target node, as is required by claim 1. Indeed, paragraph [0017], which the Examiner relies upon to reject the concept of multiple logical connections as originally recited in claim 2, discloses a network manager that can "re-identify" a path in response to a change in network topology. However, this disclosure is not directed to logical connections much less _concurrent_ logical connections, as required by claim 1.

Foster does disclose, at paragraph [0022], the concept that a virtual address can be used by two different source nodes to communicate with the same destination node, and that the virtual address can therefore represent different paths that share a common sub-path. This concept is also referred to in paragraph [0024] in connection with the discussion a virtual address being used to identify different paths. It is important to note,

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however, that from the perspective of any particular source/destination node pair, a virtual address in Foster is associated at any given time with only a <u>single</u> path. Since the virtual address is used by each routing device to route communications to a particular destination node, it can be seen how two source nodes, coupled to different source ports on the same routing device, could use the same virtual address to access the same destination node since the mapping table on the routing device would route the communications from each node to the same destination port, even though the communications may be received from different source ports on the device. By doing so, however, only one path would be established between the each source node and the common destination node. The fact that a virtual address may be used by two different source nodes to communicate with the same destination node over disparate paths (which still necessarily must share a sub-path) is therefore insufficient to anticipate the concept of multiple concurrent logical connections as recited in claim 1.

Applicants therefore respectfully submit that claim 1 is novel over Foster, and that the rejection should be withdrawn.

Applicants also respectfully submit that claim 1 is also non-obvious over Foster and the other prior art of record, as neither Foster, nor any of the other art of record, appreciates the desirability of a cluster data port that establishes multiple concurrent logical connections between a source node and a destination node. As noted above, Foster only discloses changing the path associated with a virtual address, while at all times maintaining a mapping between a virtual address and a single path between a source node and a destination node. No objective evidence has been provided establishing any motivation in the art to modify Foster to incorporate multiple concurrent logical connections between a source node and a destination node, and associated with a cluster data port, and as such, a *prima facie* case of obviousness has not been established with respect to claim 1. Reconsideration and allowance of independent claim 1, as well as of claims 3-15 that depend therefrom, are therefore respectfully requested.

Next, with respect to independent claims 16, 31 and 35, each of these claims has been amended to clarify that the cluster data port is configured to establish multiple

concurrent logical connections between the source node and the target node, with each logical connection configured to communicate data over a connection path among the plurality of connection paths. Claim 17 has been canceled, and claims 18-19 have been amended to depend from claim 16. Furthermore, claim 22 has been amended in a similar manner to claim 7, discussed above.

As discussed above in connection with claim 1, the concept of establishing multiple concurrent logical connections in a cluster data port, in combination with the other features recited in the claims, is not disclosed or suggested by Foster or the other prior art of record. Claims 16, 31 and 35 are therefore novel and non-obvious over Foster for the same reasons as presented above for claim 1. Reconsideration and allowance of independent claims 16, 31 and 35, as well as of claims 18-30, 32-34 and 36 that depend therefrom, are therefore respectfully requested.

As a final matter, the Examiner will note that Applicants have amended claims 7 and 22 to clarify that each logical connection comprises a TCP connection. In rejecting these claims, the Examiner relies upon Modi, arguing that Modi discloses TCP connections at col. 5, lines 40-46. It is important to note, however, that Modi discloses only single TCP connections between individual clients and a cluster. Thus, as with Foster, Modi does not disclose the establishment of multiple concurrent logical connections, much less multiple concurrent TCP connections, between a source node and a destination node. Claims 7 and 22 are thus patentable over the combination of Foster and Modi, and reconsideration and allowance of these claims are respectfully requested.

With respect to the remaining dependent claims, a number of these claims recite additional features that further distinguish these claims from the prior art of record. In the interest of prosecutorial economy, however, these claims will not be addressed separately herein.
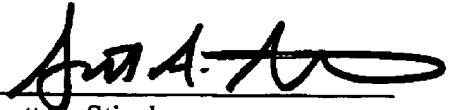
In summary, Applicants respectfully submit that all pending claims are novel and non-obvious over the prior art of record. Reconsideration and allowance of all pending claims are therefore respectfully requested. If the Examiner has any questions regarding the foregoing, or which might otherwise further this case onto allowance, the Examiner

may contact the undersigned at (513) 241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

2 MARCH 2006

Date

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